

Remarks/Arguments

35 U.S.C. §102

Claims 1-12 stand rejected under 35 U.S.C. §102(b) as being anticipated by Maeda (U.S. Patent No. 5,977,976).

It is respectfully submitted that Maeda neither teaches nor suggests a method for generating a displayable menu wherein:

“a state is assigned to each menu button, the state being “enabled” or “disabled”, wherein only an enabled menu button may be displayed, and wherein not more than one menu button within a group may be enabled simultaneously,”

or wherein:

“at least one group of two or more menu buttons is defined in said menu data segment, wherein each of the two or more menu buttons has associated a defined area on the display;”

as described in currently amended claim 1.

A problem addressed by the present invention is that menus for interactive video content are rather static, as there is no way to dynamically add or remove buttons from the screen without re-rendering the whole screen. For content authors, more sophisticated menu features would be desirable, such as the inclusion of sub-menus. In such a case, additional buttons would dynamically appear and disappear through user interaction. (Specification, page 1)

To solve this problem, the present invention provides a method to generate such dynamic menus. The claims describe a method and associated apparatus for generating a displayable menu comprising separately rendered selectable menu buttons, wherein at least one group of two or more menu buttons is defined, wherein each of the two or more menu buttons has associated a defined area on the display. As described in claim 1, a menu

button may belong to not more than one of said groups, and a state is assigned to each menu button, the state being "enabled" or "disabled," wherein only an enabled menu button may be displayed, and wherein not more than one menu button within a group may be enabled simultaneously.

The independent claims have been amended to clarify that the definition of groups is pre-defined for a menu data structure. Support for these amendments can be found at least in Table 1, in line 6 of page 3 ("buttons are organized in groups") and in line 22 of page 22 ("The group structure provides information for the menu decoder, the information defining which on-screen area needs update") in connection with line 13 of page 2 ("different menu items and buttons of an on-screen menu are rendered separately, not pagewise"). This menu data structure has particular advantages. First, the graphics decoder need not consider the whole menu for any menu operation, but may simply handle isolated button groups instead (see page 8, line 17). Second, the data structure allows easier programming of menus, and particularly easier verification of the respective programming code (see page 6, line 8).

Maeda teaches a "function setting" apparatus wherein "when the eye selection mode is set, upper-level menu items "EFFECT" and "FADER" are displayed. When an operator gazes "EFFECT", functions "TELESCOPE-CONTROL", "FREEZE", "MOSAIC", and the like are displayed as lower-level menu items of the item "EFFECT". When the operator gazes "MOSAIC" next, mosaic processing is executed. On the other hand, when the operator gazes the upper-level menu item "FADER", functions "OVERLAP", "WIPE", "TRIGGERED FADE", and the like are displayed. When the operator gazes "TRIGGERED FADE", corresponding processing is executed." (Maeda Abstract)

Generally, Maeda discloses the use of an "eye switch" function for controlling a menu visible in a viewer. This "eye switch" function, after being manually enabled, determines a gazing point or line of sight of a user watching the viewer. When it is detected that the viewer is gazing at a particular menu button, that button is selected. This eye-controlled selection method can also be applied to multi-layered menus (col. 8, line 40). In the arrangement of Maeda Figure 5, a dual-layer menu is shown that has higher-level buttons "EFFECTS" and "FADER" and lower-level buttons. One of the higher-level

buttons may be selected, using the “eye switch” function. Corresponding to the selected higher-level button, lower-level buttons are visible, and may be selected in the same way as the higher-level buttons.

In the menus of Maeda, it is not possible to select a button without activating it (see, e.g., col. 4, lines 13-15: “when one of the lower-level function menu items is selected, a function assigned to ... the selected ... item is executed”; corresponding examples, e.g., on col. 6, lines 38-39 and col. 10, lines 10-12). Thus, since buttons are automatically activated upon selection, there is a danger that buttons may be activated by mistake. As a solution, Maeda uses a two-step confirmation procedure (see col. 12, lines 38-44), which in principle requires a separate button (“OK area 200”) and makes the menu structure more complicated, rather than simpler. In contrast, in the present invention as claimed, an enabled button may have one out of three different states: unselected, selected or activated.

Furthermore, Maeda fails to explicitly show how the menu behavior is achieved, and particularly which menu data structure is used. It must be assumed that a conventional pagewise rendering is used, and that Maeda’s menu keys, for instance, keys 104 and 111, are not rendered separately. Instead, they are rendered together with the other menu keys that are visible at the same time on a current menu page. There is no teaching or suggestion in Maeda that buttons may be rendered separately without rendering a complete menu page at the same time. Thus, Maeda does not disclose or suggest that a button group is defined in the menu data structure, as in the present claims. Thus, Maeda fails to disclose a method for generating a displayable menu wherein: “a state is assigned to each menu button, the state being ‘enabled’ or ‘disabled’, wherein only an enabled menu button may be displayed, and wherein not more than one menu button within a group may be enabled simultaneously,” or wherein “at least one group of two or more menu buttons is defined in said menu data segment, wherein each of the two or more menu buttons has associated a defined area on the display;” as described in currently amended claim 1.

In view of the above remarks and amendments to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure provided by Maeda that makes the present invention as claimed in currently amended claim 1 unpatentable. It is also

respectfully submitted that currently amended independent claims 8 and 12, along with new claim 13, are allowable for at least the same reasons that claim 1 is allowable. Since dependent claims 2-7 and 9-11 are dependent from allowable independent claims 1 and 8, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's representative at (609) 734-6813, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

/Reitseng Lin/

By:

Reitseng Lin
Attorney for Applicant
Reg. No. 42,804
Phone (609) 734-6813

Patent Operations
Thomson Licensing Inc.
P.O. Box 5312
Princeton, New Jersey 08543-5312
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